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## **Fibroelastoma of the Aortic Valve. Evaluation with Echocardiography and 64-Slice CT**

Alkadhi, Hatem ; Leschka, Sebastian ; Hurlimann, David ; Jenni, Rolf ; Genoni, Michele ; Wildermuth, Simon

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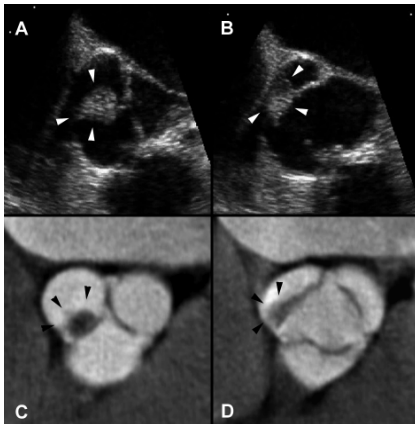
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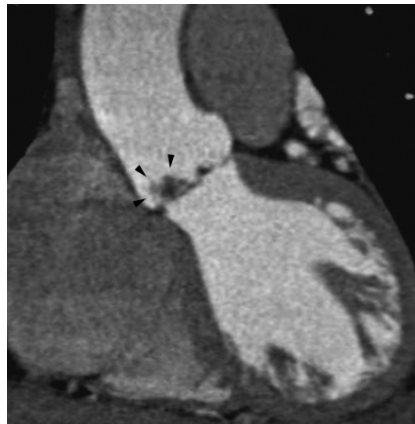
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**Figures 1A to 1D.** Transesophageal echocardiography (A, B) and corresponding 64-slice CT reconstructions (C, D) demonstrate the spherical tumor with its broad-based attachment to the non-coronary cusp of the aortic valve (arrowheads). Images during mid-diastole (A, C) and mid-systole (B, D) show the change in shape throughout the cardiac cycle which may be explained by the smooth, elastic character of the lesion.



**Figure 2.** Oblique coronal 64-slice CT reformation shows the centrally hypodense lesion with its blurred outer margins (arrowheads) corresponding to the papillary fronds of the tumor.



**Figure 3.** Macroscopic specimen shows the appearance of the tumor immersed in saline solution resembling a sea anemone which is considered diagnostic of papillary fibroelastoma.

## Fibroelastoma of the Aortic Valve. Evaluation with Echocardiography and 64-Slice CT

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A 72-year-old woman suffered from an acute left hemispheric stroke. Transesophageal echocardiography for evaluating a possible source of embolus was performed and showed a spherical, hyperechogenic tumor with a broad-based attachment to the non-coronary cusp of the aortic valve (Figures 1A and 1B, arrowheads), suggesting the diagnosis of a fibroelastoma. The lesion was further characterized with retrospective ECG-gated 64-slice computed tomography (CT) demonstrating an oval lesion attached to the sinus surface of the non-coronary aortic cusp (Figures 1C and 1D, arrowheads). It was centrally hypodense and had blurred outer margins (Figure 2, arrowheads). The tumor was removed surgically and the aortic valve was reconstructed. The gross pathologic specimen showed a lesion with a frond-like, villous surface. After being immersed in saline solution, it resembled a sea

anemone (Figure 3) providing a morphological verification of the tumor being a papillary fibroelastoma.

Cardiac papillary fibroelastoma is a rare tumor originating from the endocardium, which is hypothesized to represent a different stage of Lambl's excrescence. The recognition and correct diagnosis of papillary fibroelastoma is important since it is a treatable cause of cerebral or cardiovascular emboli. Although usually diagnosed with echocardiography, it is likely that the growing clinical use of cardiac CT may increasingly uncover this entity.